REMARKS

Reconsideration of this application is respectfully requested.

By this Amendment, claims 21-26, 31 and 36 have been amended and new claims 37-40 have been added. No new matter has been added by these amendments.

Claims 21-26 and 28-40 are pending in this application.

This invention relates to Internet telephony. In particular, as recited in the amended claims, this invention relates to systems, methods and devices to automatically announce incoming Internet telephone calls.

For example, independent claim 21, as amended, recites circuitry for notifying a user of an Internet telephony device of an incoming telephone call based on the presence of a plurality of certain frequencies indicative of a multi-frequency ring signal in an audio signal. The Internet telephony device has a two output devices – e.g., a headset and a speaker (distinct from the headset). When the circuitry detects the multi-frequency ring signal in the audio signal, it automatically and selectively routes the ring signal to the one of the output devices (e.g., the speaker). Otherwise the audio signal is routed to the other output device (e.g., the headset).

As recited in claim 21, the circuit include a plurality of frequency filters, one for each of said plurality of certain frequencies in the ring signal, each filter constructed and adapted to detect a different one of the frequencies. The circuit also includes a plurality of switches, one for each of said plurality of frequency filters, each connected to a different one of said plurality of frequency filters, for selectively routing said audio input signal to the speaker when each of said plurality of certain frequencies corresponding to an incoming call signal are detected by said plurality of frequency filters, and otherwise routing said audio input signal to said headset.

Claim 24 recites a method of notifying a user of an Internet telephony device of an incoming telephone call. When a ring signal is detected in an audio input signal, the user is notified by routing the signal to a first output device (e.g., a speaker), otherwise the signal is routed to a different output device (e.g., a headset). The presence in an audio input signal of an incoming call is indicated by a multi-frequency telephone ring signal comprising at least two distinct simultaneous frequencies. As recited in claim 24, the method includes detecting the presence of said at least two distinct simultaneous frequencies characteristic of said ring signal in said audio input signal in said Internet telephony device, and notifying said user of said incoming call by selectively routing said audio input signal to the speaker when a telephone ring signal is detected, and otherwise routing said audio input signal to said headset.

The Examiner rejected claims 21 -22, 24-26, 28-29, 31-33, and 35-36 under 35 U.S.C. § 103(a) as being unpatentable over Kozdon et al. (U.S. Patent No.: 6,937,724) in view of Greaves (U.S. Patent No.: 5,408,529) and further in view of Maurer et al (U.S. Patent No.: 5,048,076).

The grounds for this rejection are respectfully rejected.

As to claims 21, 24, 25, and 31, the Examiner states that "Kozdon teaches a circuit for notifying a user of an Internet telephony device of an incoming telephone call in an audio signal." Referring to Kozdon's figure 2, the Examiner states that Kozdon teaches "one or more switches for routing the audio input signal to a speaker remote from a headset if an incoming call signal are [sic] detected and otherwise routing the audio input signal to the headset if an incoming call signal are not detected (see figure 3, figure 4, col.3, ln.8-67).", emphasis provided.

Applicant respectfully disagrees. Kozdon does not teach or in any way suggest detecting a ring signal, nor does Kozdon teach or in any way suggest selectively routing a ring signal based on the detected ring signal.

Kozdon is trying to solve the problem of users of a computer-based telephone system forgetting to switch back to a speaker mode when a call is finished. ("The user must remember to switch back to the speaker mode after the end of the call, to ensure that he can hear the ringing of the next call . . ." *Kozdon*, col. 1, lines 30-34.) To this end, Kozdon provides a system that always switches back to speaker mode at the end of a call ("In all cases the system will revert to a known state at the end of a call, ready to process the next incoming call[.] Thus, the ringing signal cannot be missed by the user in case he does not wear the headset . . ." *Kozdon*, col. 4, lines 9-13.)

But Kozdon does not switch to the speaker (or to anywhere else) based on the a ring signal. Switching in Kozdon is done, if at all, based on a user input. In Kozdon, a user can decide where *all* audio output (including ring signal) will be sent. If the user selects a speaker, then *all* audio output is sent to that speaker. If the user selects a headset then all audio output (including any ring signal) will be sent to the headset.

Figure 2 of Kozdon is reproduced below.

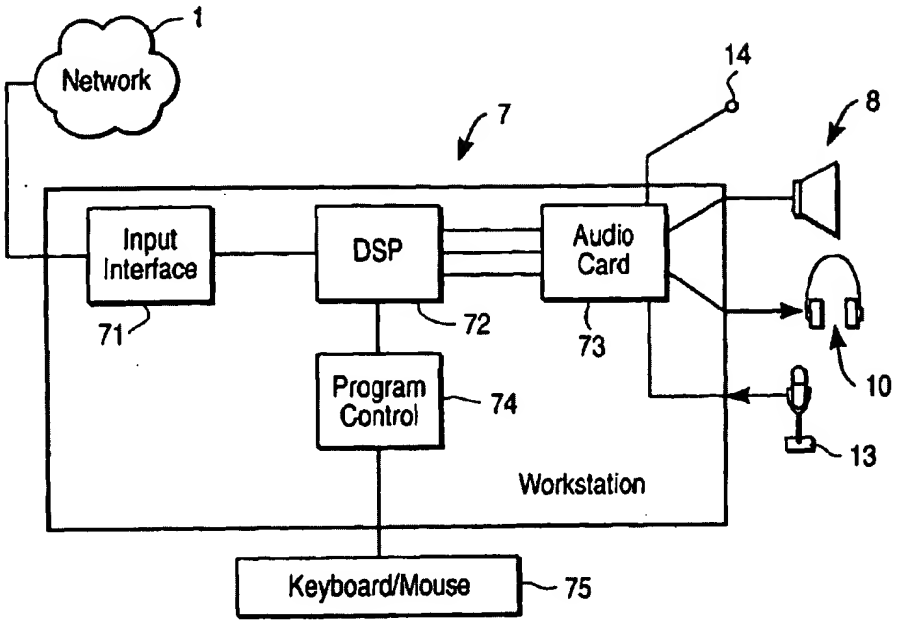


FIG. 2

As taught by Kozdon, with reference to the embodiment of his fig. 2,

> DSP 72 manages incoming and outgoing data streams under the control of program control unit 74. . . . only one speaker 8 is used which is coupled to either the right or left output of audio card 73. The other output of audio card 73 is connected to headset 10. In case of an incoming call DSP 72 generates a ringing signal which is fed to the audio channel coupled with loudspeaker 8. In another embodiment the ringing signal can be applied to both loudspeaker 8 and headset 10 with appropriate volume settings for each of the outputs. On the screen of workstation 7 an Alert-Box will be generated . . .. Such an Alert-Box indicates in addition to the ringing signal that an incoming call is waiting to be picked up. The user can, . . .select one of three choices. . . .Clicking on button 101 selects a speaker phone function. In this mode all incoming audio data are processed by DSP 72 into a single digital audio signal which will be converted into an analog audio signal by means of audio card 73. This single analog

> signal is then fed to speaker 8. Clicking on button 102 selects the headset mode. In this mode DSP 72 generates the audio signal on the other audio channel which will be converted into a single audio signal by means of audio card 73 and fed to headset 10. Clicking on button 103 cancels the incoming call.

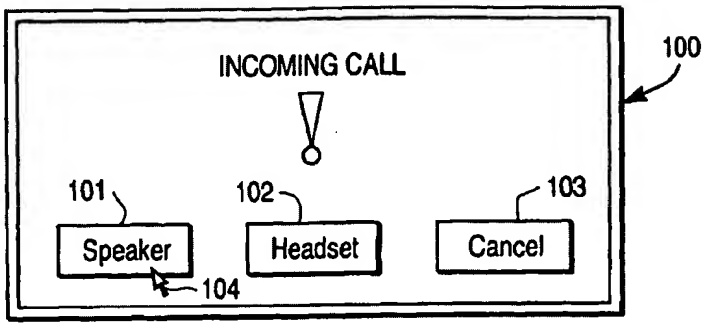
Kozdon, col. 3, lines 8-34.

Kozdon describes a system where a ring signal is applied to one or both output devices – to a speaker alone or to a speaker and headset.

> If a telephone call is made * * * a ringing signal will be sent to workstation 7. According to the present invention, the ringing will be output to the speaker 8. In addition, the ring may be also applied to the headset. Together with the ringing a message may pop up on the screen of the workstation 7 asking the user to choose between a speakerphone function or a headset function. * * * In case the user decides to use the speakerphone function the headset will be disabled and the incoming audio data will be directed to the loudspeaker 8. In case the headset function is chosen, the loudspeaker 8 will be disabled and audio signals will be forwarded to the headset 10.

Kozdon, Col. 2, lines 35-50 (see also, col. 3, lines 13-17).

In Kozdon, the decision as to where the ring signal should go is made by the user and not, as the Examiner would have it, made based on the detection of the ring signal in the audio signal. Kozdon's Fig. 5 (reproduced below) shows an exemplary user selection interface.



Furthermore, Kozdon is silent about how a ring signal is obtained or detected. In the embodiments described, he merely mentions that a "ringing signal" is sent (col. 3, lines 33-34). For example, in the embodiment of Kozdon's Fig. 3 (reproduced below), the ring is played on the speaker and/or the headset, as selected by the user. A switch 81 selects either the speaker 8 or the headset 10. And the control signal 82 used to operate the switch 81 is determined based on the user's selection.

> DSP 80 . . . processes a digital data stream 88, for example packetized audio data. . . . DSP 80 generates a single audio signal which is converted into an analog signal . . . [which] is fed to a switch 81 which operates under control of a control signal 82. Switch 81 feeds the analog signal either to . . . loudspeaker 8 . . . [or] headset 10.
>
> . . . In case of an incoming call switch 81 couples the output of D/A-converter 89 . . . so that the ringing signal will be fed to the loudspeaker 8. ***According to the selection made by the user, as shown in FIG. 5, switch 81 couples either loudspeaker 8 or headset 10*** with the respective audio signal.

Kozdon, col. 3, lines 8-18, emphasis provided.

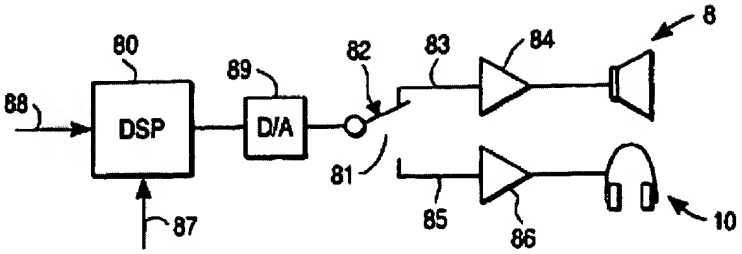


FIG. 3

So, in this embodiment, Kozdon directs all audio to either the speaker 8 or the headset 10, but that is done based on a user selection made after the ring has been heard on the speaker (recall, as noted above, that in Kozdon the system always reverts back to the speaker at the end of a call – *See, e.g., Kozdon*, col. 4, lines 9-11). In this Kozdon embodiment, after the ring is played on the speaker, the user determines where all audio output should go, and that determination is used to control the switch 81 via control signal 82.

There is nothing in this embodiment (or anywhere else in Kozdon) to teach or in any way suggest ring detection or switching to the speaker based on such selection.

Kozdon's next embodiment operates in a like manner. Fig. 4 of Kozdon, reproduced below. According to Kozdon's next embodiment,

> Audio I/O card 90 generates a stereo analog output signal which is fed to terminals 92 and 93. External switch box 96 comprises two switches 94 and 95. Switches 94 and 95 are controlled by a control signal 91. Control signal 91 can be provided by audio I/O card 90, or by a parallel or a serial output port, or any other suitable port of the respective workstation. Switches 94 and 95 either couple loudspeakers 8, 9 or headset 10 with terminals 92 and 93, respectively.

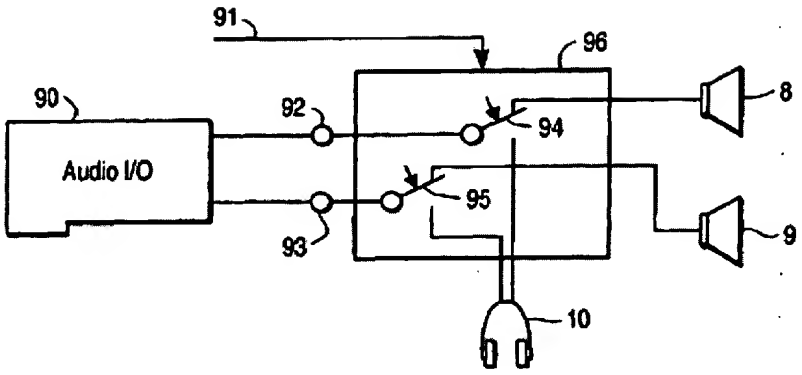


FIG. 4

Again, the selection of speaker(s) vs. headset is controlled by a user selection. Again, all incoming calls will ring on the speakers – because Kozdon always ("In all cases . . .") reverts the system to a known state at the end of the call. And again, the user selection (speakers vs. headset) is made after the ring.

Thus, although Kozdon's systems do send the ring signal to a speaker and/or a headset, he does not teach or in any way suggest that the circuitry automatically determines where an audio signal should go. Nor does Kozdon suggest how a ring is detected. His only mention of ring detection is at col. 3, lines 13-15 ("In case of an incoming call DSP 72 generates a ringing signal which is fed to the audio channel coupled with loudspeaker 8."), but he does not say or in any way suggest that the "ringing signal" is a multi-frequency ring signal (as claimed), nor that the "ringing signal" comprises 520 Hz and 3250 Hz signals (as claimed in some of the claims). By the time Kozdon sends out the audio signal from the DSP, he has already decided that he has a ring signal. In Kozdon, a ring signal is sent to the workstation when a call is made ("a ringing signal will be sent to workstation 7" *Kozdon*, col. 2, lines 37-38) Kozdon further teaches that the "ringing signal" is part of a packetized data stream. *Kozdon*, col. 2, lines

61-62. But Kozdon does not describe the nature of his ring signal any further. In particular, Kozdon does not teach or in any way suggest a multi-frequency ring signal.

The Examiner acknowledges that Kozdon "fails to teach one or more a plurality of frequency filters (i.e., band pass filter), one for each of said plurality of certain frequencies, and each filter constructed and adapted to detect a different one of the plurality of certain frequencies for detecting one or more frequencies corresponding to an audio input signal, and one or more a plurality of switches, one for each of said plurality of frequency filters, each connected to a different one of said plurality of frequency filters."

The Examiner applies Greaves to try to overcome this acknowledged deficiency in Kozdon. The Examiner specifically refers to Greaves' "figure 9, BPF 210, 211, switches 232, 230, 240, 242, col.12, ln.1-67". The supposed motivation for the Examiner's proposed combination (Kozdon & Greaves) is that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Greaves, into view of Kozdon in order to avoid the problem of speech interference as suggested by Greaves at column 1, lines 60-65."

This is the Examiner's motivation, and it has nothing to do with the Kozdon or the problem he was trying to solve. Kozdon makes no mention of speech interference. He wants to make sure that an incoming call rings on the speaker. To this end, Kozdon reverts the system back to a default "speaker" mode at the end of a call so that **any** incoming signal (ring or not) will play on the speaker. The user can then select to use a headset and/or speaker. The notion of speech interference is not an issue for Kozdon, and it is unclear why one looking at Kozdon would want to solve a problem of speech interference.

Greaves relates to a dual tone detector operable in the presence of speech or background noise. Greaves' system might be applicable to a system in which dual tones are sent on a line already carrying speech or otherwise noisy. Kozdon, on the other hand, teaches no such system. In Kozdon, a call comes in, the speaker rings, the user selects where to send the output for the rest of the call, the call terminates, and then the system resets so that the next call will ring on the speaker. Kozdon has no teaching or suggestion of any need for dual tone detection in the presence of speech or noise.

Similarly, there is no reason why one skilled in the art, reading Greaves, would consider combining it with a system like Kozdon's. Motivation to combine Kozdon with Greaves is lacking (the Examiner is respectfully reminded that obviousness under §103 cannot be established by combining prior art to produce the claimed invention absent some teaching or suggestion supporting the combination). The Examiner's statements of motivation are conclusory, at best.

Further, even if Kozdon and Greaves were, arguendo, in some way combined, such a proposed combination would not produce the presently claimed invention. Notably, the Examiner has merely said that Kozdon lacks certain elements and that Greaves could provide those elements. But the Examiner has not indicated where in Kozdon (or how) such elements would be provided.

Even when combined with Greaves, as the Examiner proposes, Kozdon still lacks certain claimed elements. In particular, as acknowledged by the Examiner, "Kozdon and Greaves, in combination, fails to teach the detection based on the presence of a plurality of certain frequencies indicative of a multi-frequency ring signal. However, Maurer teaches such features (see col.16, ln.30-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the

teaching of Maurer, into view of Kozdon and Greaves in order to avoid the problem of speech interference as suggested by Greaves at column 1, lines 60-65."

Again, the Examiner has provided no support or motivation in the references to this proposed combination. He simply repeats the conclusory "motivation" to combine Greaves with Kozdon as supposed motivation to combine Maurer with Greaves and Kozdon.

Accordingly, applicant respectfully submits that no proposed combination of Kozdon, Greaves and Maurer, inasmuch as such a combination is even possible, would teach the presently claimed invention of claim 21. Any such combination would lack at least the frequency filters and switches "for selectively and automatically routing said audio input signal to the first output device when each of said plurality of certain frequencies corresponding to an incoming call signal are detected by said plurality of frequency filters, and otherwise routing said audio input signal to said second output device."

Since claim 21 is patentable over the prior art, so too are its dependents (claims 22, 23, 32 and 37).

Similarly, applicant respectfully submits that no proposed combination of the prior art would teach the presently claimed invention of independent claim 24. Any such combination, if possible, would lack at least, the steps of "detecting an incoming call by detecting the presence of said at least two distinct simultaneous frequencies characteristic of said ring signal in said audio input signal in said Internet telephony device, and notifying said user of said incoming call by automatically and selectively routing said audio input signal to the first output device when said distinct simultaneous frequencies

corresponding to a telephone ring signal are detected, and otherwise routing said audio input signal to said second output device."

Since claim 24 is patentable over the prior art, so too are its dependents (claims 33-35 and 38).

Similarly, applicant respectfully submits that no proposed combination of the prior art would teach the presently claimed invention of independent claim 25. Any such combination would lack at least the steps of "automatically sending an output signal to a first output device distinct from a second output device when said multi-frequency ring signal corresponding to an incoming call is detected, and otherwise sending said audio input signal to said second output device." And since claim 25 is patentable over the prior art, so too are its dependents (claims 26, 28-30 and 39).

Applicant further respectfully submits that no proposed combination of Kozdon, Greaves and Maurer, inasmuch as such a combination is even possible, would teach the presently claimed invention of independent claim 31 or its dependent claims 36 and 40. Any such combination would lack at least "circuitry . . . constructed and adapted to detect in said audio input signal a multi-frequency signal indicative of an incoming call, and automatically to send an output signal to said first output device when said multi-frequency signal corresponding to an incoming call is detected, and otherwise to send said audio input signal to said second output device."

The Examiner rejected claim 23 under 35 U.S.C. 103 as being unpatentable over Kozdon in view of Greaves and further in view of Maurer and further in view of Hanson. For the reasons given above, applicant respectfully submits that claim 23 is patentable over the prior art. However, further as to claim 23, applicant again notes the failure of the Examiner to provide any motivation to combine these references. All that the Examiner states is that "it would have been obvious to one of ordinary skill in the art at

the time the invention was made to incorporate the teaching of Hanson, into [sic] view of Kozdon, Greaves, and Maurer in order to remove the DC component." What the Examiner has done here is provide a conclusory statement about the possible outcome of such a combination, but no teaching or suggestion in any of the references that such an outcome is even desirable.

In view of the above, withdrawal of this rejection is respectfully requested.

The Examiner rejected claims 30 and 34 under 35 U.S.C. 103(a) as being unpatentable over Kozdon in view of Greaves and further in view of Maurer and further in view of Moganti.

For the reasons given above, applicant respectfully submits that claims 30 and 34 are patentable over the prior art. However, further as to claims 30 and 34, applicant again notes the failure of the Examiner to provide any motivation to combine these references. Once again the Examiner's supposed "motivation" is, in fact, the outcome of the combination ("to notify the user that he/she has the incoming calls"), but once again this is the Examiner's motivation to combine the references, provided with the hindsight of applicant's invention.

In addition, applicant again notes that in Kozdon, the switch between speaker and headset is made ***after*** the ring by the user. So Kozdon would not need any notification or announcement after the ring. Once Kozdon's system has rung, the user knows about the call and no announcement is needed.

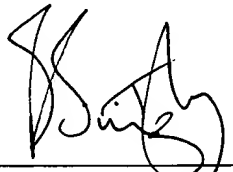
In view of the above, withdrawal of this rejection is respectfully requested.

CONCLUSION

Applicant respectfully submits that this application is in condition for allowance, and an early action to that effect is earnestly solicited.

Should the Examiner believe that a telephone call would expedite the processing of this application, the Examiner is invited to telephone the undersigned at the number provided.

CHARGE STATEMENT: Deposit Account No. 501860, order no. **2641-0002.**
The Commissioner is hereby authorized to charge any fee specifically authorized hereafter, or any missing or insufficient fee(s) filed, or asserted to be filed, or which should have been filed herewith or concerning any paper filed hereafter, and which may be required under Rules 16-18 (missing or insufficiencies only) now or hereafter relative to this application and the resulting Official Document under Rule 20, or credit any overpayment, to our Accounting/ Order Nos. shown above, for which purpose a duplicate copy of this sheet is attached. **This CHARGE STATEMENT does not authorize charge of the issue fee until/unless an issue fee transmittal sheet is filed.**

CUSTOMER NUMBER 42624	Respectfully submitted, By:  Brian Siritzky, Ph.D. Registration No.: 37,497

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